STATE AUTOMATION SYSTEMS STUDY

VIRGINIA STATE REPORT

SITE VISIT: OCTOBER 20 - 22, 1993

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FINAL

Prepared for:

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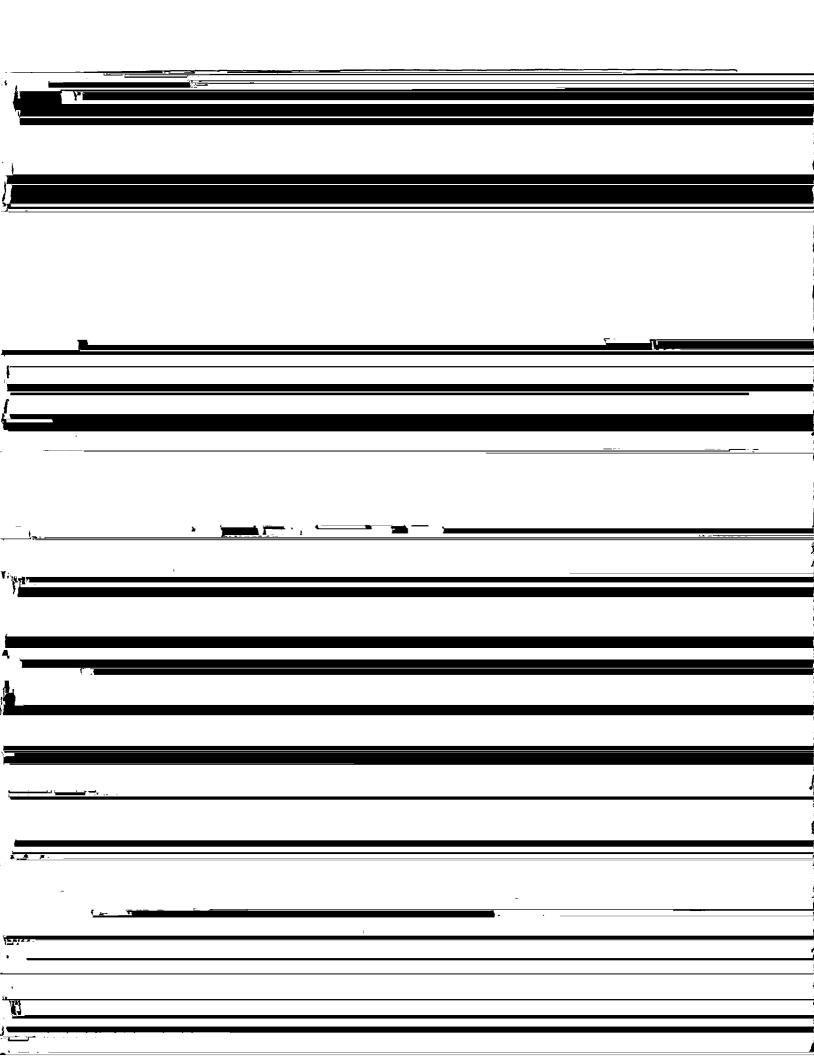
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STATE PROFILE

System Name:	Virginia Client Information System (VACIS)(ADAPT under development)
Start Date:	VACIS-FSP - 1983; ADAPT - 1992
Completion Date:	VACIS-FSP - 1985; ADAPT - 1994 (estimated)
Contractor:	VACIS - State developed ADAPT - Planning and functional assistance from Deloitte/Touche & UNISYS partnership. State managed technical development
Transfer From:	ADAPT - NAPAS (CA)

Cost: (ADAPT only)

Actual:	N/A
Projected:	$18.565.214
FSP Share:	Unknown
FSP %:	Unknown

Number of Users:	2.871 (based on information provided by DSS in Orkand Management Information Systems Technical Questionnaire on October 14. 1993)

Basic Architecture:

Mainframe:	Unisys 2200/9222
Workstations:	Unisys terminals and IBM compatible personal computers (PCs)
Telecommunications Network:	T1 backbone connecting 147 dedicated VACIS tail circuits 9.6

System Profile:

Programs:	Food Stamp, Aid to Families with Dependent Children

1.0 STATE OPERATING ENVIRONMENT

The Virginia Department of Social Services (DSS) is part of the Health and Human Resources (HHR) organization. It is headed by a Commissioner who reports to the Secretary of HHR and who is also advised by the State Board of Social Services.

The Commissioner directly manages the following entities:

- Assistant Commissioner - Child Support Enforcement
- Office of Internal Audit
- Office of Volunteerism
- Division of Human Resource Management
- Division of Management and Customer Services
- Special Assistant

In addition, the Commissioner of DSS supervises two deputy commissioners who manage the operation of various divisions and offices. These organizational structures are:

Deputy Commissioner - Local Programs

- Principal Assistant Deputy
- Office of Interdepartmental Regulation
- Division of Benefit Program Management
- Division of Licensing Programs
- Division of Local Program Operations
- Regional Program Operations
- Local Agencies
- Division of Service Program Management

Deputy Commissioner - Administration

- Principal Assistant Deputy
- Office of Budget
- Office of Community Services
- Office of General Services
- Division of Financial Management
- Division of Information Systems

The Food Stamp Program (FSP) is administered by the Division of Benefit Program Management's Food Assistance Unit. This division is also responsible for the operation of the Economic Assistance, Medical Assistance, and Energy and Emergency Assistance Programs.

The Food Assistance Unit is headed by the Program Manager and consists of the following positions:

- Executive Secretary

- Program Consultants
- Program Coordinators
- Fiscal Technician
- Program Support Technician

The population of Virginia was approximately 6,216,528 as of 1990. The State's distribution of food stamp recipients is described by DSS as being mixed in nature, with the population being spread between towns and cities with over 50,000 population and rural areas.

Unemployment in Virginia was highest in 1982, with a level of 7.7 percent, and generally declined from that date to 1988, reaching a low of 3.9 percent in 1988. Since 1988 the rate has increased, reaching 5.8 percent in 1991.

The October 1992 version of *The Fiscal Survey of States* provides the following information, compiled by the National Association of State Budget Officers:

- Virginia's nominal expenditure growth for fiscal year (FY) 1993 was in the 0 to 4.9 percent range; the national average for expenditure growth was 2.4 percent.

- Virginia reduced the 1992 State budget by $57.1 million after it was approved.

- State government employment levels in Virginia decreased by 5.11 percent. This change was much larger than the 0.60 percent national average decrease in State government employment.

- Virginia implemented changes to increase revenues by $17.5 million for FY 1993. These changes included increases in sales taxes and user fees.

- The regional outlook indicated that the Southeast region was hard hit by the recession. Unemployment rates were slightly below the national average, although per capita personal income growth and population growth were above national averages.

2.0 FOOD STAMP PROGRAM OPERATIONS

Virginia is county operated and State supervised with several independent cities and metropolitan areas. There are 4 such entities and a total of approximately 135 direct-service offices located across the State. State staff did not identify any unique geographical characteristics that impact the operations of the Food Stamp Program within the state.

Recent factors that have impacted operations include:

- Regulatory change (Federal)
- Fiscal changes (State level budget cuts)
- Unemployment
- Influx of foreign language speaking recipients

- Large caseload increases
- Court orders on timely application processing

Foreign language speaking recipient increases are mainly limited to Hispanic and Asian populations in the areas around Washington D.C.

Systems that support Food Stamp Program operations include the Virginia Client Information System (VACIS), Integrated Eligibility Verification System (IEVS), Claims Payment, and APPTRACK (an application tracking program). Both VACIS and APPTRACK impact the eligibility determination process with VACIS also supporting the issuance process. APPTRACK is FSP specific while VACIS supports the Food Stamp, Aid to Families with Dependent Children (AFDC), and Child Welfare Programs. IEVS is utilized for batch processing of matches against Federally mandated databases for the Food Stamp, AFDC, Medicaid, and General Assistance Programs; the Claims Payment system is FSP specific.

Virginia is currently in the midst of developing the Automated Benefits Application System (ADAPT) as a front end for VACIS. The ADAPT project is discussed in detail later in this report.

2.1 Food Stamp Program Participation

As indicated in Table 2.1, Food Stamp Program participation increased by 51.6 percent for households and 22.3 percent for individuals between 1988 and 1992. This compares with AFDC increases during the same time frame of 27.9 and 28.8 percent.

The largest increase in both programs occurred from 1989 to 1991.

Table 2.1 Average Monthly Public Assistance Participation

PROGRAM	1992	1991	1990	1989	1988
AFDC Cases Individuals	70,968 187,719	63,437 169,514	56,759 150,697	54,238 146,344	55,470 145,794
Foster Care	2,182	1,194	2,141	2,116	1,919
GA Cases Individuals	N/A	N/A	N/A	N/A	N/A
FSP Households Individuals	204,860 405,036	174,658 423,353	144,506 346,804	137,304 331,835	135,107 331,120
Medicaid	N/A	N/A	N/A	N/A	N/A

* "N/A" indicates that data was not available from State personnel as of the date of the on-site interviews.

2.2   FSP Benefits Issued Versus FSP Administrative Costs

The ratio of benefits issued to FSP administrative costs has improved from 8.3:1 in 1988 to 11.2:1 in 1992.

Virginia's average monthly benefit issuance per household over the last five years, as provided in Table 2.2, has increased.[1]

Table 2.2 FSP Benefits Issued

	1992	1991	1990	1989	1988
Average Monthly Benefit Per Household	$164.35	$156.11	$142.34	$125.05	$122.12

2.3   FSP Administrative Costs

Virginia's Food Stamp Program administrative costs for the past five years are provided in Table 2.3.[2] Both total cost and average cost per household have fluctuated over this period.

Table 2.3 FSP Federal Administrative Costs

	1992	1991	1990	1989	1988
Total FSP Federal Admin. Cost	$36,321,547	$32,134,608	$25,017,524	$25,904,650	$23,544,518
Avg. Federal Admin. Cost Per Household Per Month	$14.70	$15.63	$14.44	$15.69	$14.77

2.4   System Impacts on Program Performance

Automated systems impact upon program performance is limited to those areas where increased efficiency in handling the work flow necessitated by program rules, regulations, and policy may be measured. Virginia, a county-administered State, has little control over the staffing patterns and/or internal work flows of the local offices.

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[1] The number of households and benefit amounts use data reported in the FNS *State Activity Reports* for each year.

[2] The number of households and FSP Federal administrative costs are derived from data reported in the FNS *State Activity Reports* for each year.

The following areas have been addressed to explore the impact automation has had upon FSP within Virginia:

- Staffing
- Responsiveness to regulatory change
- Combined official payment error rates
- Claims collection
- Certification/reviews

2.4.1 Staffing

Virginia staff stated that there had been an increase in caseworker staffing over the past five years and that the average caseload per eligibility worker (EW) had also increased during this time period. Exact figures as to the amount of the increase were not available from State level program staff at the time of the on-site interviews. Virginia currently has approximately 1,441 intake, eligibility, and senior eligibility workers and 259 supervisors. Approximately 18,500 applications are pending at the end of any given month.

The impact of the automated system on staffing requirements is also an unknown. VACIS is an established system that has been in use for a number of years. No direct relationship can be drawn from a period prior to system installation to a point subsequent to that time. State staff did state that VACIS did not make EWs more efficient.

2.4.2 Responsiveness to Regulatory Change

Virginia state staff indicated that 2 of the 14 regulations targeted by the project staff were not implemented on time. These two regulations, 274.2(b)(2) and 274.2(b)(3), deal with the combined initial allotment portion of the Administrative Improvement and Simplification Provisions of the Hunger Prevention Act and have been identified by almost all States as causing difficulty in implementation.

2.4.3 Combined Official Payment Error Rate

Virginia's official combined error rate, as indicated in Table 2.4, has fluctuated somewhat between 1988 and 1992.

Table 2.4 Official Combined Error Rate

	1992	1991	1990	1989	1988
Combined Error Rate	8.91	9.49	6.96	8.45	7.45

2.4.4 Claims Collection

Table 2.5 presents the following claims collection data: the dollar value of claims established, the dollar value of claims collected, and the percentage of claims established that were collected. The overall annual dollar value of claims collected fluctuated, while the dollar value of claims established showed an overall decrease during the five-year period. The value of claims established in 1992 represented a 32 percent decrease from the peak value in 1989.

Table 2.5 Total Claims Established/Collected

	1992	1991	1990	1989	1988
Total Claims Established	$1,162,156	$1,397,844	$1,496,386	$1,719,204	$1,711,371
Total Claims Collected	$945,454	$1,032,953	$512,300	$1,071,798	$1,127,822
As a % of Total Claims Established	81.4%	73.9%	34.2%	62.3%	65.9%

2.4.5 Certification/Reviews

The food stamp component of VACIS underwent a post-implementation review in 1990. The system was certified and all system's costs were allowed without exception.

3.0 OVERVIEW OF THE SYSTEM

This section describes the functionality, integration, and level of complexity of the current VACIS.

3.1 System Functionality

Major features of VACIS functionality are described in this section. Areas addressed include:

- *Registration.* Clerical personnel make the first contact with a food stamp applicant. The applicant must state the program(s) he or she is applying for and provide identifying information at the time of initial contact.

Clerical personnel use terminals to conduct an initial clearance of public assistance files. The search is limited to AFDC and FSP current and past participants and applicants and is conducted for each household member. Key data items include the applicants name, partial name, and Social Security number (SSN). Optional search items include date of birth, sex, race, and previously assigned client identification number. The system does not enforce clearance for all household members since no data is actually entered into the system at the time of initial clearance. Office procedures, however, require that all named potential recipients must be cleared at this point in the application process.

The system has the capability to copy historical records into the current application. Records are maintained for a period of 36 months after closure of the case. Clerical workers are required to review potential matches to determine whether they are to be included. Cases may be assigned to specific eligibility workers at this time and appointments may be scheduled for the comprehensive interview. This is a manual process.

The need for expedited service is determined by an intake worker or a clerical worker, depending upon the procedures in specific county offices. The system does not determine the need for expedited service.

- *Eligibility Determination.* Eligibility determination is made after the applicant has been interviewed by the EW. The applicant must complete a hard copy application form for the program(s) for which he or she is applying. This form is then reviewed by the client and EW. The data obtained from the application form and interview is entered into the system after the interview by either the eligibility worker or by a dedicated data entry operator. The procedures vary by county and it is estimated that 50 percent of the applications are entered directly by EWs at this time. Code sheets are used to distill information from the application form into system related information before entry.

  Data entry screens may be bypassed by the EW/data entry operator as necessary. All entry screens have immediate on-line data edits for both code and logic errors and include on-line calculator screens for computation of benefit levels and financial eligibility. There are six basic data entry screens for information collected from the application and interview.

  Verifications are not tracked by the system. EWs must "pend" cases requiring the provision of additional verifications from the applicant.

  The system does not determine the eligibility of the applicant or the persons within the household that may comprise relevant assistance units for the various programs.

  After entry of the application data, the system produces a turnaround document that is maintained as part of the case record in the local office

- ***Benefit Calculation.*** Calculation of benefit levels is performed by the eligibility worker. Calculator screens are available for use in this process. The system does calculate the benefit level at the time the application is entered. Supervisory authorization is not required for benefits on new or reapplying cases. Supervisory authorization may be required for eligibility workers in probationary status; this procedure, however, is not enforced by the system.

  Calculator screens are capable of calculating monthly net and gross income, and monthly utilities.

- ***Benefit Issuance.*** Virginia's benefit issuance system consists of direct coupon mailout - 46 percent, over the counter (OTC) - 33 percent, authorization to participate (ATP) cards - 21 percent, and cash out - less than 1 percent. OTC benefits are processed manually from rosters printed by the system. In many agencies, contractors are used for OTC and direct mailout. ATPs are redeemed at financial institutions (banks and check cashers). Cash out is limited to aged and disabled recipients in one county monthly. ATPs are printed and mailed from the State's central office. Daily ATPs are generated at the local agency from VACIS issuance files.

  Approximately 2 percent of issuances do not meet the 30 day standard for newly certified households. Administrative staff indicate that heavy volumes, understaffing, and client error contribute to this problem.

  County-level workers may enter data regarding undelivered, stolen, and returned benefits through the system. Certified, OTC, and other issuance requests/demands are also supported by the system.

  Replacement issuances are requested on-line and supported by paper documents. Manual processes allow expedited and replacement benefits to be issued/reissued the same day.

  Issuance is conducted on the first of the month and daily for special issuances and expedited service.

- ***Notices.*** Notices are automatically generated by VACIS based upon certain case actions/parameters. These notices include:

  - Key events related to household participation
  - Key events related to household eligibility
  - Eligibility determination results
  - Benefit reductions
  - Benefit increases
  - Application approval
  - Denial based on eligibility determination
  - Closure

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EW narrative input to computer generated notices is not supported by the system though workers may manually add written comments prior to mailing. Only notices regarding recertification are printed centrally. All other notices are printed at the local agencies via downloaded print files on system addressed printers.

AFDC and FSP notices are not combined and there are no plans to combine this function within the current system. State staff was not able to provide figures as to the volume of notices printed for either program.

- *Claims System.* The Claims Payment System is a separate system that is not interfaced to VACIS. Workers do not enter any data related to claims establishment or collection in VACIS. This lack of VACIS data extends to the calculation of recoupment amounts, cause of overpayments or underpayments, whether fraud is suspected, and current balances.

  The Claims Payment System is a State-level, FSP specific system that is described by as administrative staff as being in a "steady state" with no enhancements planned until the new ADAPT system is implemented.

  Claims are established and balanced manually with paper forms submitted by workers to the central State unit responsible for this function. Verified recoupment amounts are subtracted from monthly benefits by VACIS, which also generates a notice to the client that an overpayment or underpayment has occurred.

- *Computer Matching.* At the time of certification, the VACIS system performs matching against State unemployment compensation wage data and Social Security Administration (SSA) data, including SSA data for self-employed persons. IEVS matching is performed in a batch mode on a regular basis by the stand-alone IEVS system which also performs this task for AFDC and Medicaid.

  Virginia does not interface with the computer systems of private industry or any other State. Sporadic batch matches of participants are made against Washington, D.C. recipients.

  Hits are reported to EWs via individual hard copy reports listing the source of the data and the discrepancy. FSP regulations regarding the amount and degree of discrepancy are followed in determining what constitutes a hit. Each agency maintains a manual system for the tracking of discrepancies. Discrepancies are not prioritized nor are those that have the greatest cost impact indicated.

  Workers do not have the ability to indicate that discrepancies are resolved. Discrepancies will continue to be reported to the worker via individual hard copy printouts as long as the source data does not match FSP reported data as shown by VACIS. Tracking of the discrepancies is the responsibility of the individual counties and may vary across the State.

State staff's comments indicate that they believe that the greatest cause of reported discrepancies is the substantive misreporting of household information by applicants.

- *Alerts.* VACIS does not support on-line alerts. Paper reports are available that show due, and overdue, caseworker actions, as well as recertification and pending reports that show cases requiring follow-up actions. These reports are produced two or three times per week.

- *Monthly Reporting.* Monthly reporting is not required in Virginia.

- *Report Generation.* In addition to the reports mentioned in the Alerts section above, VACIS provides information for a variety of FNS mandated reports such as:

  - FNS-259 Food Stamp Mail Issuance Report
  - Monthly Reconciliation Report
  - Report on Untransacted Outstanding ATPs

  There is no user-oriented ad hoc report ability in VACIS.

- *Program Management and Administration.* Electronic mail is available at the administrative level through a separate system. It is not used for the dissemination of policy changes or operationally related instructions. Rather, it is used for memoranda and similar messages. VACIS does not support on-line policy manuals, organizational charts, workload allocation monitoring, on-line case narratives, or problem reporting/task management.

3.2 Level of Integration/Complexity

VACIS is in the process of having a front end added by the ADAPT transfer. VACIS is a turnaround document oriented system originally designed to allow centralized data entry operators to enter data after the fact from code sheets prepared by EWs. It is limited in its integration of program areas and does not include Medicaid. Primarily batch oriented with on-line data entry and real-time updates, it is typical of systems developed during the 1970s and early 1980s. VACIS does not, for example, support on-line policy manuals or extensive help functions. In a system designed for formatted data entry, these features are not as necessary as they are for interactive interviewing based systems.

ADAPT, while still in the developmental stage, promises to be much more integrated. It is designed to calculate benefits, determine eligibility, generate notices of actions, authorize benefits, and provide extensive reporting for the AFDC, Food Stamp, Medicaid, and AFDC Foster Care Programs. It will also collect information, but not determine eligibility for general relief, refugee programs, auxiliary grants, and other programs when applications are made for these programs at the same time an application is made for a Federal program supported by the system.

It is predicated upon the concept of a single worker having responsibility for administrating casework for all of these programs for the client. It will have statewide clearance abilities and be able to obtain data from multiple systems through a single point of entry. It is designed to be an interactive interview system, thus reducing the paperwork requirements for a number of program areas.

Virginia is currently installing a number of personal computers (PC) in the local offices. These computers will operate under standard emulation for the present, however, future modifications may bring a degree of localized intelligence to the system.

Virginia and California are both currently modifying the same basic system for statewide implementation and may benefit from the cross fertilization available by having similar concurrent efforts. While no formal methodology was noted in this regard, the use of the same system contractors and extensive informal conversations between State staff may serve the same purpose.

3.3   Workstation/Caseworker Ratio

PCs are being installed for all eligibility workers and all eligibility supervisory staff.

3.4   Current Automation Issues

VACIS is currently frozen as far as non-mandated enhancements are concerned due to the ADAPT development effort. VACIS is currently performing well, with high user ratings on response time and reliability.

4.0   SYSTEM DEVELOPMENT AND IMPLEMENTATION

This section discusses both the VACIS and ADAPT system development efforts and their current status. VACIS is seen as the "previous system" even though it is still in full operation and many aspects of the system will be retained and interfaced into the ADAPT system when it is fully implemented. Most of these retained features pertain to back end processing requirements and are transparent to the end user.

4.1   Overview of the Previous System

VACIS has been described in previous sections of this report. It may best be categorized as an add-on to an AFDC system first implemented in the mid-1970s. The system replaced a paper forms oriented manual system with a centralized data entry, on-line inquiry, turnaround document oriented batch update system. Modifications to the base system over the years have increased its performance, improved response times and reliability, and added minor features. It is currently a stable system that shows the disabilities associated with all systems of that timeframe. Maintenance of the system's code is time consuming due to the many changes made over the years and technical advances have made many of its software components obsolete and unmaintainable.

4.2   Justification for ADAPT

The ADAPT Advanced Planning Document (APD) (April 7, 1993) includes as its goals and objectives the following items:

- Automate the eligibility decision-making process to the maximum extent possible.

- Provide administrative cost savings by further automating Public Assistance functions.

- Provide additional cost savings through further reduction and elimination of payment errors due to incorrect eligibility determinations.

- Provide benefits accurately and in a timely manner.

- Provide uniform and consistent application of public assistance policy for all applicants and recipients.

- Provide the capacity through a single process to search multiple computer systems/files for client information and to identify the source of the information.

- Provide the capacity to generate update transactions for multiple computer systems/files without major changes to existing systems.

- Minimize development costs by preserving as much of the functional integrity of existing systems as is possible.

- Provide the tools and training to enable local workers to respond to frequent program regulation and policy changes in effectively administering the program.

- Eliminate redundancy in the collection and processing of information.

- Reduce paperwork.

- Provide the equipment and system functionality to every EW to facilitate system inquires, updates, and case management activities.

The overall goal of the ADAPT project is to "enhance the delivery of benefits by effecting more efficient intake, application and eligibility processes within the Commonwealth. The system will provide local eligibility workers with automated tools to more efficiently process applications and provide benefits."

Virginia believes that the application of rule based logic is essential to support the eligibility determination process and thus to provide more accurate and timely processing of applicant data and delivery of benefits as well as to relieve the overburdened paper process which is error prone as regulations and policy change.

The current system, VACIS, stores the information necessary for eligibility determination and has been enhanced to comply with Federal regulations. However, VACIS is not seen as capable of providing the types of automated tools and abilities needed to address the increase in caseloads (particularly in the FSP), rising error rates, court suits for failing to process food stamp cases in a timely manner, and caseload standard variances that must be addressed by providing more efficient tools for existing case workers.

The overall effect of the development and implementation of ADAPT would be to shift much of the burden of decision making to the system, which would use rule based decision making, and to further aid EWs by providing automated case management tools.

The cost/benefit analysis presented in the ADAPTS APD shows that the major

this internally developed system was implemented in 1984-1985 and has served the State, with some modifications, ever since.

The ADAPT system, currently in the development phase, is a transfer of the Napa Automated Public Assistance System (NAPAS), the California county-level system which is also the base for the California Statewide Automated Welfare System (SAWS) project. The ADAPT contractors are Unisys and Deloitte/Touche. Alternative system reviews were conducted in 1991-1992 and concentrated on the desirability of functions and capabilities offered by the investigated systems. These systems included the following:

- Florida CRIS-E
- Kansas
- Minnesota
- MAGIC (California county-level system)
- Wisconsin
- NAPAS (California county-level system)

A total of 12 systems were reviewed to varying degrees. The systems were demonstrated in their home States by State staff or by vendors, and extensive conversations were held with other State's officials regarding system satisfaction. FNS input was also received regarding NAPAS.

While program staff limited their examination of potential candidate systems to the various features offered, project staff indicated that their criteria included the following:

- Similar database management system
- Similar State and FSP organizational structure
- Similarity in caseworker roles and responsibilities
- Degree of application integration
- Program operating environment
- Flexibility to make changes

Contractor involvement in the various projects tasks, beginning with the General System Design, was reported as limited to advice and technical assistance and was performed on-site. The contractor staff and project manager had more than one year of experience in public assistance programs and systems, and in the transferred system.

Resource and cost estimates for the project were arrived at by utilizing other States' experiences and internal State staff's estimates. Pilots are being conducted in four counties within the State. However, no changes in the system, conversion, or implementation approach have resulted from the pilot experience due to the relatively early stage of this effort.

All APD documents have been produced by the management information systems (MIS) group. An individual contractor was on board to help with the Implementation APD (IAPD).

4.4   Conversion Approach

Conversion of data to VACIS was limited to all current cases and all new cases accepted during the conversion period. No closed cases were converted to the new system. All conversion was manual and consisted of filling out code sheets from existing case records and entering them in the new system via a centralized data entry operation in each county. Approximately 120,000 to 130,000 FSP cases were converted. Each case is estimated to have taken less than 30 minutes to convert, with those cases having multi-program participation and large families taking the longest to convert. No problems were reported with system downtime, response times, completeness, or bugs during the conversion effort; however, maintaining normal workloads during this period did present a challenge.

Because the system was based on a centralized data entry, turnaround document concept, caseworker training was less extensive than that called for in a direct entry model. Training consisted of a three and one half day session for both workers and supervisors and a one day class for clerical employees. Many of the staff had previously worked on the VACIS AFDC system and were thus familiar with the basic concepts of the system design. Training was conducted in a centralized classroom setting by State staff.

ADAPT is viewed as a front-end for the existing VACIS. Data entered into the ADAPT application entry sub-system will interface and feed VACIS issuance and reporting files for VACIS generation of reports.

4.5   Project Management

ADAPT has a formal project organization within DSS. It consists of a project manager with responsibility for the two main project organizations, the Implementation and Development Units.

The Implementation Unit is responsible for the following functions, each of which has a single individual assigned to it:

- •   Security
- •   ADAPT APD
- •   Long-range plan
- •   Local system interfaces
- •   Training
- •   Model intake
- •   Capacity plan
- •   Marketing
- •   Communications

The Development Unit consists of seven main units and numerous sub-units with varying levels of personnel assigned. The main units are:

- •   Technical coordination

- Application processing
- Application entry
- Eligibility determination
- Interfaces and reports
- Quality assurance
- VACIS support

The Project Manager reports to the MIS group of DSS and devotes 100 percent of her time to the ADAPT project. The Project Manager's experience includes 25 years of MIS experience, and 16 years of Project Management experience.

Functional areas represented in the project committee include FSP, MIS, and contractors.

The project management team is responsible for the review of the performance and deliverables of the contractors.

4.6   FSP Participation

The FSP portion of VACIS development included State-level FSP policy personnel only. Some requirements and system reviews were performed by field-level FSP personnel, although their role was seen as secondary. FSP policy personnel were extensively involved in the review, approval, and input processes of the project throughout the duration of the effort, including the planning, development, and implementation phases.

The ADAPT project has integrated program personnel into the basic project structure. These individuals report through the project structure which is under the technical organization of DSS. Program knowledge is obtained from these individuals, from administrators in the base user group, and groups that are formed and utilized as necessary during specific phases of the project.

4.7   MIS Participation

The MIS unit within DSS has the primary organizational responsibility for the ADAPT project. The formal project structure insures program area input and program managers have administrative input into the conduct of the project. MIS representation includes both technical and administrative personnel.

A user group of generic management personnel is being utilized during the project. It has met weekly during the development phase of the project and has recommendation and review/approval authority but was not active during the planning phase. MIS involvement has been constant since the beginning of the project and includes the task of establishing requirements in addition to the recommendation and review/approval tasks given to the user group.

4.8 Problems Encountered During Development and Implementation

Problems have been discovered with the NAPAS system response time, basically related to the structure of the indices used to handle the relatively small volume of cases the system was originally designed to process. In addition, as a county-based system, it needs to be restructured to handle multiple entities. Differences between California and Virginia eligibility and other program requirements for AFDC and Medicaid are part of the analysis necessary for transfer modifications. No particular problems were identified in these areas by Virginia staff.

5.0 TRANSFERABILITY

NAPAS is currently being modified by both Virginia and California to serve as the basis for statewide integrated systems. Virginia's apparent plans to use the system as a front end eligibility determination module and to save as much as possible of the existing back end processing of VACIS and other systems, differs from the task faced by California, which has few existing systems of this type.

Transferability of the final system product in Virginia will not be significantly different from that of the base system that will result from the SAWS project in California. Both will support statewide eligibility determination, multiple local offices within counties, and aggregated statewide data. Virginia is positioning itself to move to a more graphical user interface version of the base system at a later date. The installation of intelligent workstations (microcomputers) as a part of the initial project was justified as follows:

- Expand functionality and alleviate the load of horizontal platform software (e.g., word processing) on the central system and supporting network.

- Allow local agencies to also work with local systems.

- Extend the productive life cycle as current technology is evolving.

Some counties and cities within Virginia have developed local systems that are independent of the central processing site. It is Virginia's desire to allow the counties to continue to operate these systems and provide them the means to switch from State-level to county-level systems when necessary. Office automation functions would also be supported by the new system's hardware and software capabilities, allowing automation of largely manual functions at the local office level.

The use of intelligent workstations would also allow future modifications to the system that would allow off-loading of various system processes to the desktop devices although formal plans (APDs) have not yet been developed for this major step in system design.

Virginia's approach is to develop common inquiry and update paths for its existing systems; increase user functionality by the use of modern, integrated, interactive interview eligibility

determination systems; and install intelligent workstations capable of supporting current office automation needs. This is viewed as a pragmatic approach to the system development effort. Investments in existing systems are protected while increased benefits are brought to the field level.

The use of internal State personnel for the bulk of the technical development effort may hinder transfer of the ADAPT system to other states. Both Unisys and Deloitte/Touche are involved in the development of this system; however, they serve as technical and high-level advisors as opposed to true system developers.

6.0 SYSTEMS OPERATIONS

The following section provides a description of VACIS. The description includes a profile of system components and a discussion of the system operating environment.

6.1 System Profile

• **Mainframe:**	Unisys 2200/9222 Exec1100, MAPPER, CMS1100, DMS, SIMAN and COBOL 85	
• **Disk:**	Unisys 9720	
• **Tape:**	Cartridge -	Storage Tek 4780
	Reel -	Unisys 0874s
• **Printers:**	Impact -	Unisys 770
	Laser -	Siemans 777
• **Front Ends:**	Unisys -	DCP35
• **Workstations:**	Unisys UTS 20/30 and 486 PCs	
• **Telecommunications:**	14 - T1 state backbone circuits connecting 147 - 9.6 and 19.2 Uniscope lines to the DIT data center	

A detailed listing is provided as Exhibit A-6.1 in Appendix A.

6.2 Description of Operating Environment

The operating environment consists of several components. This section describes these components, which include the current operating environment, maintenance, telecommunications, performance, response time, system downtime, and plans for future hardware and software enhancements.

6.2.1 Operating Environment

The Virginia Department of Information Technology (DIT) operates a multi-platform data center supporting DSS and a wide variety of other State agencies. DIT also provides the technical support for VACIS based on a Unisys platform as well as other departmental applications running on one of two IBM platforms.

DSS has a Department of Information Services (DIS) which contains both the applications development group supporting VACIS and a technical support group that provides database and other technical services for the DSS headquarters staff. The System Support unit of DSS provides a liaison function between DIS and DSS staffs. Its major role is to create technical specifications for DIS from DSS requirements and ensure that all support capabilities are meeting the requirements of DSS.

The data center runs 7 days a week, 24 hours a day on the Unisys 2200 under EXEC1100. CMS1100 is used as the transaction processor and teleprocessing control. Software security is managed by SIMAN; COBOL 85 is the primary programming language.

Peripheral equipment consists of Unisys equipment - M9720 disk units, STK 4780 tape cartridge units supporting a 30,000 volume library, and 3420-type reel tape drives supporting a 6,000 volume tape library. There are also Unisys DCP35 Front End Processors and printers (Siemans 777 lasers and Unisys 770 1200 LPM impact units).

An uninterruptible power supply (UPS) is installed to provide 20 minute battery backup for the disk subsystems only. Full data center battery and generator backup is being evaluated. The facility houses three mainframes and has a great deal of growth space.

There is a DSS application disaster recovery plan in place to support VACIS and other DSS work, but there is no DIT plan in place. Contracts for commercial support have been proposed, but nothing has been approved at this point.

6.2.2 State Operations and Maintenance

The operations and support staff for the Unisys mainframe system consists of the following personnel: data center operations - 24, systems programmers - 16, help desk - 5, network support - 5, and production control - 3. The on-line processing shift for VACIS runs from 7:00 a.m. to 6:00 p.m. when batch processing begins. The batch cycle usually runs until 10:00 p.m., but can run as late as 7:00 a.m. during peak processing periods.

The application support staff is part of DIS within DSS. The current staff numbers 30 for both VACIS and the new NAPAS transfer for ADAPT. There are additional staff within DIS under the Bureau of Administration and Operations. The operations staff runs an RJE environment to the Unisys 2200 and schedules and runs all of the batch cycle work and supports the printer output in their equipment room. There are 5 operations

staff and a technical support unit consisting of 15 people that provide technical support (i.e., MAPPER, database administration, and DPS software support). Current levels are sufficient to support the application and the State feels that it is competitive in attracting new staff, when necessary, due to a rework of job classifications and salaries in the past few years. There has been only one pay increase in the last three years, but turnover has not been a problem. Staffing levels have remained constant and have not had a significant impact on VACIS.

Hardware and software maintenance are planned for Wednesday and Sunday when production is not normally scheduled. Full disk backups are performed every weekend and stored off site. Incremental backups are performed nightly by individual applications.

6.2.3 Telecommunications

Virginia has a statewide backbone that many applications share. It consists of seven local access and transport areas (LATA) located throughout the State and is supported by MCI. Each LATA has at least two T1 circuits tying the LATA to the Richmond DIT data center. Each site utilizes MCI's Virtual Private Network which multiplexes the workload over both T1s. Each circuit has the capability to support the full LATA workload, but both lines are used for production transmissions to keep them in service and operational.

From each LATA, DSS has its own dedicated tail circuit configuration to connect each of its local offices to the DIT data center. There are 147 9.6 or 19.2 KB circuits that connect the offices to the T1 network. Each circuit uses the Unisys Uniscope protocol to tie the Unisys terminals and 486 PCs to VACIS.

6.2.4 System Performance

The Unisys 2200 had only been installed for four months at the time of the site visit. The system averages approximately 53 percent utilization with peaks of over 68 percent with VACIS using approximately 20 percent of the system processing resources. There appears to be more than enough capacity to support the DSS system applications over the next year. The impact of ADAPT's on-line eligibility determination and benefit calculation has not been factored in yet, but since all of the calculations will be performed in the mainframe, it is expected to raise the utilization significantly. Any other major replacement activity will require an evaluation of the hardware platform capacity and could justify an increase the processing capability.

Daily transaction volumes for VACIS are listed as 70,000, with 21,500 being attributed to food stamp activity. A transaction is defined as an inquiry or update into the database.

6.2.5 System Response

No timings are maintained for terminal response time. Both DSS/MIS and DIT indicated that response times are normally in the four second range and that there were few complaints from the field concerning consistently or regularly occurring periods of

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degraded response time. Since there were no records of historical response time performance, no specific areas of concern were identified.

6.2.6 System Downtime

No detailed records are kept on system availability or unscheduled outages. In discussions with the DIT management, it was stated that reliability was estimated to be in the 99.5 percent range. There were no indications from either DSS program or systems staff that reliability of the system was a problem.

6.2.7 Current Activities and Future Plans

Virginia currently has plans to upgrade the network to include peer-to-peer communication and to allow bandwidth on demand via frame relay technology at a yet-to-be-determined date.

7.0 COST AND COST ALLOCATION

This section addresses the following topics: VACIS enhancement costs, ADAPT planning and development costs and approved Federal funding, on-going VACIS operating costs, and cost allocation methodologies applied to allocating ADAPT development and VACIS operating costs.

The FSP portion of VACIS has been operational since 1984. In mid-1989, Virginia submitted a Family Assistance Management Information (FAMIS) APD to the Department of Health and Human Services (DHHS)/Agency for Children and Families (ACF) that addressed VACIS enhancements needed to bring the system into compliance with Federal regulations. Concurrent with this VACIS enhancement effort, Virginia initiated the ADAPT development project to enhance the front end of the existing VACIS to increase functionality, perform data capture, perform eligibility determination and improve reporting processes.

The sources of information used to produce this report include: FAMIS APD, May 1989; ADAPT Planning APD, June 1992; ADAPT IAPD, April 1993; Virginia DSS Cost Allocation Plan, September 1990. Additional documentation reviewed includes written correspondence between Virginia and FNS.

7.1 VACIS FAMIS/ADAPT Development Costs and Federal Funding

This section addresses costs related to the VACIS enhancement and ADAPT and the FNS share of those costs. The majority of costs are estimated costs extracted from available documentation. Efforts to collect information from Virginia addressing actual costs incurred and the FNS share of those costs for these activities were unsuccessful.

- *VACIS Enhancement.* Through September 1992, Virginia expended $930,186 for activities which were approved as part of the FAMIS APD. These activities included the required system enhancements and a pilot effort to implement the

enhancements on a limited scale. The follow-on to these development activities were efforts to extend the enhanced VACIS to all field offices. These efforts were estimated to cost $3.5 to $4 million. Of that amount, the majority was earmarked for personal computers (PC) and related equipment. The actual cost of $2.977 million included cost estimates for multiplexers and related equipment. DHHS was the sole Federal Funding Agency of the activities performed under the FAMIS APD. The approved funding by that agency totalled more than $3.57 million. The actual amount incurred by DHHS for the follow on activities was not available.

- *ADAPT Planning.* As of April 1993, approved ADAPT planning activities totalled more than $1.4 million. FNS assumed a 23 percent share of these estimated planning costs, or $330,000, at a 50 percent Federal funding percentage (FFP).[3] The ADAPT planning costs incurred to date were not provided.

The ADAPT Planning APD, submitted for approval in June 1992, requested funding for the ADAPT planning activities totalling $282,048. This amount was later increased by $225,000 to fund the cost of a planning contractor. An April 1993 revision increased the planning costs by $926,970 to more than $1.4 million to accommodate contractor support for planning activities. These additional contractor costs were moved from the IAPD budget into the planning budget to accommodate the rules surrounding sole source procurement of contractor support.

- *ADAPT Development and Implementation.* The April 1993 IAPD (Revised July 14, 1993) estimated ADAPT development and implementation costs to be $18,565,214.[4] The FNS share of this amount is $10,903,359. This share was computed as follows:

  - Equipment costs of $7.3 million (estimated) are allocated between the U.S. Department of Agriculture (USDA)/FNS and DHHS/Health Care Financing Administration (HCFA) only.[5] This is due to the fact that the ACF had already paid the FFP share through FAMIS. The USDA/FNS share is 78.4 percent, or $5.7 million; the HCFA share is 21.6 percent, or $1.58 million.

  - Non-equipment costs of $11.262 million are allocated between USDA/FNS, DHHS/HCFA and DHHS/ACF. The USDA/FNS share is 46 percent, or $5.180 million.

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[3]ADAPT Staff Costs for Planning APD, April 6, 1993.

[4]Letter, July 9, 1993.

[5]DHHS/Family Support Administration (FSA) has previously funded 1,237 PCs as part of the VACIS enhancement.

Pilot implementation is scheduled for September 1994 based on a seven quarter development and implementation period that begins April 1993. IAPD approval was expected in November 1993. Costs incurred to date for development and implementation were not provided.

7.1.1 ADAPT System Components

Implementation of the ADAPT enhancements will continue support for all public assistance programs currently supported by VACIS. Additional program support is not planned.

7.1.2 Major ADAPT Development Cost Components

The estimated costs for hardware and State personnel account for more than 75 percent, or $14.7 million, of the $19.26 million ADAPT budget presented in the IAPD. The cost for contractor support is not included in the ADAPT IAPD budget.

7.1.2.1 Hardware

Thirty-nine percent of the ADAPT IAPD budget, or $7.3 million, is allocated to purchase and install PCs, printers, and related hardware. The 1,954 PCs (2,011 with approval of 57 additional PCs) will be combined with the 1,237 (1,169 to LWAs) currently deployed as part of the VACIS enhancement to provide one PC for each eligibility and supervisory position. One laser printer and four dot matrix printers will be fielded for every five PCs with a minimum of one laser printer for each unit of EWs.

7.1.2.2 Contractor

The ADAPT IAPD does not include a line item for contractor support. The $926,970 allocated to contractor support in the ADAPT Planning APD was earmarked for planning services to be provided by the Unisys/Deloitte Touche application partnership. There were two contracts awarded. One to Deloitte Touche for $225,000 and one to the Unisys/Deloitte Touche partnership for $926,970. The total award was for $1,151,970.

The Unisys/Deloitte Touche team was the prime implementor of NAPAS which was implemented in California's Napa County to support automated welfare eligibility determination. Because of its compatibility with VACIS, Virginia elected to incorporate NAPAS technology into ADAPT. The Unisys/Deloitte Touche partnership will provide analysis and guidance in support to the detailed transfer of NAPAS features into VACIS and utilize the Unisys mainframe in applying MAPPER, the Unisys programming language.

7.1.2.3 State Personnel

The ADAPT IAPD allotted 38 percent of its total budget, or $7.4 million, for State personnel direct costs ($6.66 million) and indirect costs ($.753 million).[6]

7.2 VACIS Operational Costs

The VACIS operational costs for FYs 1990 to 1993 were not provided. According to Virginia cost personnel, the column on the SF-269 which is routinely used to claim State operating costs for the system that supports the FSP (*50% ADP Oper*), is not used by Virginia to claim VACIS operating costs. Additional explanation of the procedures used by Virginia to claim VACIS operating costs was not provided.

7.2.1 Cost Per Case

Since operational costs for VACIS were not provided, the monthly cost per case could not be computed.

7.2.2 ADP Operational Cost Control Measures and Practices

DIS is responsible for providing automated information systems leadership and services that support the administrative and program responsibilities of DSS. This support includes: the study, testing, implementation, and ongoing maintenance of automated applications systems, including VACIS; implementation and ongoing maintenance of data processing hardware and software; identification, implementation, and maintenance of data processing policies and procedures; DSS personnel training; management of computer support operations including data control and computer room operations.

Major activities supported by DIS are assigned a project identifier (ID). The project ID is further broken down by task and phase. All charges associated with a specific activity are assigned the project ID associated with that activity.

DIS personnel salaries are accumulated into the payroll system using one project ID. The actual working times for specific projects for the employees are captured using the DIS time recording system. For cost allocation purposes, the working times are expressed as percentages by relevant project ID, task, and phase for each employee and used to distribute the employee's salary for the quarter to the appropriate project and, ultimately, funding source. Payroll costs are then accumulated by project ID, task, and phase on the time sheet.

VACIS operating costs are accumulated by a job accounting system, ValuGen, based on the project ID assigned to each VACIS job. The job accounting system accumulates central processing unit (CPU) resources used by the VACIS job. It

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[6] These figures only represent state personnel development costs. They do not reflect other state personnel costs such as installation.

also collects resource usage for tape service (in seconds), local print lines, remote print lines, and transactions. The total cost of all resources used by all jobs assigned to a given project is calculated by applying a rate factor to the total usage for each resource type accumulated for that project.

The projects used to accumulate personnel and operating costs to be charged to FSP are:

- **_VACIS Generic Costs._** This project captures costs that are specifically related to the automation and ongoing maintenance of the general support functions of VACIS. These costs support various data processing design, programming, implementation, and systems utilization functions that cannot be allocated to a specific program area but do support activities for AFDC, FSP, and Social Services programs in general. Costs incurred in this area are accumulated into the Joint Eligibility and Services Pool and eventually allocated to the programs supported by VACIS based on case count.

- **_VACIS-Food Stamps._** This project is used to accumulate direct costs that

Equipment costs are allocated only between USDA/FNS and DHHS/HCFA at a rate of 78.4 and 21.6 percent, respectively.[7]

7.3.2 VACIS Operational Cost Allocation Methodology and Mechanics

The DSS Cost Allocation Plan defines the methodology to be used to spread the costs for administering social service programs to specific public assistance programs. To spread these costs fairly, the methodology divides administrative costs into two types:

- Costs incurred by State and regional offices for personnel and other resources.

- Costs incurred at the local agency level for personnel and other resources.

Costs originating in the State central office, the five regional offices, and the local agency offices are attached to specific programs as the allocation progresses. Costs which benefit the operations of the social services as a whole are accumulated into the administrative cost pool. The administrative cost pool is distributed to the various programs using these attached costs as the allocation base.

- ***State and Regional Offices.*** All State and regional offices are divided into numbered cost centers. Costs incurred in these centers are accumulated by the State accounting system. Timesheets completed by employees record the percentage of time spent by each employee on programs and activities. When an employee has worked on one specific program/activity, that employee's time is reported as 100 percent to that program/activity. When an employee works on more than one program/activity, the distribution of time is made by the supervisor and is expressed as percentages of time for each program/activity. The employee's salary costs are distributed based on the percentages recorded on the time sheets and summarized by the following units:

    - Bureau of Planning and Management Analysis
    - Division of Information Systems
    - Division of Field Operations
    - Division of Benefit Programs
    - Division of Service Programs

    The distribution of payroll based on timesheets is the basis for distributing joint operational costs of the various bureaus within these units. The costs accumulated for these units become part of the main allocation base.

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[7]ACF had already paid the FFP share of the equipment costs under FAMIS.

The Office of the Commissioner, the Divisions of Financial Management, Human Resources, Planning and Evaluation, the Statewide Cost Allocation Plan, and the Volunteer Services contribute costs to the administrative cost pool.

- *Local Agencies.* Each local agency reports the numbers and salaries by classifications of all eligibility workers, service workers, and joint workers. In addition, each agency submits financial reports for administrative expenditures monthly. The primary reports address: food stamp issuance, fuel, employment services, and regular administration.

The costs submitted via the Food Stamp Issuance Report and the Fuel Report are charged directly to FSP and the Fuel Program, respectively. The expenditures claimed on the Employment Services Report are totaled with the services expenditures shown on the Regular Administration Report and added to the administrative cost pool. The remaining administrative costs are then allocated as follows:

- The total of the reported joint program costs are distributed to the service and eligibility functions based on the ratio of the number of 100 percent service workers and 100 percent EWs reported in the automated Local Agency Personnel System.

- For those localities that do not have separate service or EWs, the joint costs for these localities are allocated between service and eligibility based on the ratio of the number of cases under care in the respective activity.

- The total administrative costs for eligibility programs for all agencies (directly charged and allocated) are distributed among the specific financial assistance programs based on their results of the random moment study for eligibility. The value computed for FSP represents the incremental administrative cost attributable to the additional procedures needed solely to determine eligibility for food stamp participation, beyond those procedures jointly necessary for determining eligibility for financial assistance programs and FSP.

- The salary and fringe benefits of the superintendent, for time spent supervising food stamp issuance when there is no direct supervisor in the issuance, is allocated based on the ratio of the number of hours of employees working in issuance to the total available hours for all employees being supervised. This value is calculated at the State level and deducted from the total eligibility cost before allocating the eligibility cost to the Federal and State programs.

- The direct and joint costs allocated to eligibility are allocated to the various benefit programs based on random moment time study.

APPENDIX A

STATE OF VIRGINIA

EXHIBITS

Exhibit A-2.1
Response to Regulatory Changes

Code	Regulation	Provision	Federally Required Implementation Date	Implemented on Time (Y/N)?	Computer Programming Changes Required (Y/N)?	Changes to State Policy/ Legislation Required (Y/N)?
1.1	1: Mickey Leland Memorial Domestic Hunger Relief Act	1: Excludes as income State or local GA payments to HHS provided as vendor payments. 273.9(c)(1)(ii)(F)	8/1/91	N/A	N/A	N/A
1.2	1: Mickey Leland Memorial Domestic Hunger Relief Act	2: Excludes from income annual school clothing allowance however paid. 273.9(c)(5)(i)(F)	8/1/91	N/A	N/A	N/A
1.3	1: Mickey Leland Memorial Domestic Hunger Relief Act	3: Excludes as resource for Food Stamp purposes, household resources exempt by Public Assistance (PA) and SSI in mixed household. 273.8(e)(17)	2/1/92*	Y	Y	N
1.4	1: Mickey Leland Memorial Domestic Hunger Relief Act	4: State agency shall use a standard estimate of shelter expense for households with homeless members. 273.9(d)(5)(i)	2/1/92*	Y	N	N
2.1	2: Administrative Improvement & Simplification Provisions of the Hunger Prevention Act	1: Extended resource exclusion of farm property and vehicles. 273.8(e)(5),etc.	7/1/89	Y	N	N
2.2	2: Administrative Improvement & Simplification Provisions of the Hunger Prevention Act	2: Combined initial allotment under normal time frames. 274.2(b)(2)	1/1/90	N	Y	N
2.3	2: Administrative Improvement & Simplification Provisions of the Hunger Prevention Act	3: Combined initial allotment under expedited service time frames. 274.2(b)(3)	1/1/90	N	Y	N
3.1	3: Disaster Assistance Act & Non-Discretionary Provisions of the Hunger Prevention Act	1: Exclusion of job stream migrant vendor payments. 273.9(c)(1)(ii)	9/1/88	Y	N	N

Exhibit A-2.1
Response to Regulatory Changes

Code	Regulation	Provision	Federally Required Implementation Date	Implemented on Time (Y/N)?	Computer Programming Changes Required (Y/N)?	Changes to State Policy/ Legislation Required (Y/N)?
3.2	3: Disaster Assistance Act & Non-Discretionary Provisions of the Hunger Prevention Act	2: Exclusion of advance earned income tax credit payments. 273.9(c)(14)	1/1/89*	Y	N	N
3.3	3: Disaster Assistance Act & Non-Discretionary Provisions of the Hunger Prevention Act	3: Increase dependent care deductions. 273.9(f)(4), etc.	10/1/88	Y	Y	N
3.4	3: Disaster Assistance Act & Non-Discretionary Provisions of the Hunger Prevention Act	4: Eliminate migrant initial month proration. 273.10(a)(1)(ii)	9/1/88	Y	Y	N
4.1	4: Issuance	1: Mail issuance must be staggered over at least ten days. 274.2(c)(1)	4/1/89	Y	Y	N
4.2	4: Issuance	2: Limitation on the number of replacement issuances. 274.6(b)(2)	10/1/89	Y	Y	N
4.3	4: Issuance	3: Destruction of unusable coupons within 30 days. 274.7(f)	4/1/89	Y	N	N

*   These dates were changed after the State completed this form and the site visit occurred; therefore, the responses to these particular regulatory changes may be inaccurate.

Exhibit A-6.1
State of Virginia Hardware Inventory

Component	Make	Acquisition Method	Number/ Features
CPU			
2200/9222	UNISYS	Purchase	222 MB main storage, 80 MIPS
DISK			
9720	UNISYS	Purchase	Controllers - 9 Drives - 128
TAPE			
Reel Tape Drives	UNISYS	Purchase	MTU 0872/74 (18)
Cartridge Drives	STK	Purchase	4780 - 14
PRINTERS			
Impact	UNISYS 770	Purchase	PRU 1208 - 3
Laser	Siemans 777	Purchase	4300 - 3
FRONT ENDS			
FEP	UNISYS DCP35	Purchase	Datanet 7500 - 4 Datanet 820 - 1
REMOTE EQUIPMENT			
Workstations	UNISYS terminals (UTS 20-30)	Purchase	1,214*
	UNISYS PCs (486 tower)	Purchase	1,657*

*   Data source: Orkand State Automation Study
          Management Information Systems
          Technical Questionnaire
          Respondents: Kathy Henley, System Support Supervisor,
                    DSS,MCS,DIS
                    John Larman, System Development Supervisor, DSS,
                    MCS, DIS

APPENDIX B

STATE OF VIRGINIA

ANALYSIS OF OPERATOR USER SATISFACTION SURVEYS

OVERVIEW

This appendix presents the results of the Operational Level User Satisfaction Survey. Frequency counts of responses to all applicable items on the survey are included, grouped by the topic covered by the item. The results for the items covering each topic are summarized as well.

The responses to the Operational Level User Satisfaction Survey represent the perceptions of eligibility workers (EWs) in Virginia. In other words, these responses do not necessarily represent a "true" description of the situation in Virginia. For example, the results presented regarding the response time of the system reflect the workers' perceptions about response time, not an objective measure of the actual speed of the response.

Description of the Sample

The following table summarizes the potential population size and the final size of the sample who responded.

Number of EWs in Virginia	Number Selected to Receive Survey	Percentage Selected
1,441	63	4.4%
	Number Responding to Survey	Response Rate
	23	36.5%

The eligibility workers selected to receive the survey were selected randomly so their perceptions would be representative of EWs in Virginia. The number of responses, however, is low and produces a small sample that may not be representative of the randomly selected group.

Summary of Findings

Overall, respondents generally are satisfied with the computer system in Virginia. Most EWs think that the system provides acceptable overall response time, availability, accuracy, and ease of use. Nevertheless, workers' responses indicate some problems with particular features of the system. Workers also feel that the system generally has a positive impact on job satisfaction; a large majority thinks that the system is a great help.

Since Virginia's current system has been operational since 1985, comparisons between the current and previous systems would be of limited value. Responses to comparative questions, therefore, are not solicited for systems that were implemented more than five years ago.

SYSTEM CHARACTERISTICS

Response Time

What is the quality of overall system response time?

	Number of Respondents	Percentage of Respondents(%)
Poor	3	13.0
Good	17	73.9
Excellent	3	13.0

What is the quality of system response time during peak periods?

	Number of Respondents	Percentage of Respondents(%)
Poor	14	60.9
Good	9	39.1

How often is the system response time too slow?

	Number of Respondents	Percentage of Respondents(%)
Rarely	2	8.7
Sometimes	19	82.6
Often	2	8.7

Eligibility workers surveyed think that system response time generally is acceptable. Nearly 87 percent of EWs feel that overall system response time is good or excellent; however, the majority thinks response time during peak periods is poor.

Availability

How often is the system available when you need to use it?

	Number of Respondents	Percentage of Respondents(%)
Rarely	2	8.7
Sometimes	7	30.4
Often	14	60.9

How often is the system down?

	Number of Respondents	Percentage of Respondents(%)
Rarely	1	4.3
Sometimes	18	78.3
Often	4	17.4

A majority of eligibility workers believes that the system often is available when they need to use it, but over 95 percent of EWs also think that the system is sometimes or often down. The system downtime, however, does not seem to be intrusive enough to detract from the perception that the system generally is available.

Accuracy

What is the quality of the information in the system?

	Number of Respondents	Percentage of Respondents(%)
Poor	3	14.3
Good	16	76.2
Excellent	2	9.5

How often is a case terminated in error?

	Number of Respondents	Percentage of Respondents(%)
Rarely	18	85.7
Sometimes	2	9.5
Often	1	4.8

How often is eligibility incorrectly determined?

	Number of Respondents	Percentage of Respondents(%)
Rarely	16	76.2
Sometimes	5	23.8

How often is the system's data out-of-date?

	Number of Respondents	Percentage of Respondents(%)
Rarely	16	76.2
Sometimes	4	19.0
Often	1	4.8

Most eligibility workers think the system's data and computations are quite accurate. Almost 86 percent of the workers feel that the quality of the information in the system is good or excellent. Significant majorities also believe that problems related to cases terminated in error, incorrect eligibility determination, and obsolete data are rare.

Ease of Use

How often do you have difficulty obtaining necessary information from the system?

	Number of Respondents	Percentage of Respondents(%)
Rarely	8	36.4
Sometimes	12	54.5
Often	2	9.1

How often do you have difficulty learning to use the system?

	Number of Respondents	Percentage of Respondents(%)
Rarely	13	59.1
Sometimes	7	31.8
Often	2	9.1

How often do you have difficulty automatically terminating benefits for failure to file?

	Number of Respondents	Percentage of Respondents(%)
Rarely	16	88.9
Often	2	11.1

How often do you have difficulty generating adverse action notices?

	Number of Respondents	Percentage of Respondents(%)
Rarely	13	86.7
Sometimes	1	6.7
Often	1	6.7

How often do you have difficulty generating warning notices?

	Number of Respondents	Percentage of Respondents(%)
Rarely	9	81.8
Sometimes	1	9.1
Often	1	9.1

How often do you have difficulty restoring benefits?

	Number of Respondents	Percentage of Respondents(%)
Rarely	16	84.2
Sometimes	3	15.8

How often do you have difficulty identifying recipients already known to the State?

	Number of Respondents	Percentage of Respondents(%)
Rarely	17	81.0
Sometimes	1	4.8
Often	3	14.3

How often do you have difficulty updating registration data?

	Number of Respondents	Percentage of Respondents(%)
Rarely	14	70.0
Sometimes	5	25.0
Often	1	5.0

How often do you have difficulty updating eligibility and benefit
information from recertification data?

	Number of Respondents	Percentage of Respondents(%)
Rarely	13	68.4
Sometimes	4	21.1
Often	2	10.5

How often do you have difficulty identifying cases which are
overdue for recertification?

	Number of Respondents	Percentage of Respondents(%)
Rarely	14	73.7
Sometimes	3	15.8
Often	2	10.5

How often do you have difficulty monitoring the status of all
hearings?

	Number of Respondents	Percentage of Respondents(%)
Rarely	9	81.8
Often	2	18.2

How often do you have difficulty tracking outstanding
verifications?

	Number of Respondents	Percentage of Respondents(%)
Rarely	7	53.8
Sometimes	5	38.5
Often	1	7.7

How often do you have difficulty automatically notifying households of case actions?

	Number of Respondents	Percentage of Respondents (%)
Rarely	10	71.4
Sometimes	2	14.3
Often	2	14.3

How often do you have difficulty notifying recipients that recertification is required?

	Number of Respondents	Percentage of Respondents (%)
Rarely	14	73.7
Sometimes	2	10.5
Often	3	15.8

How often do you have difficulty identifying cases making payments through recoupment?

	Number of Respondents	Percentage of Respondents (%)
Rarely	14	73.7
Sometimes	3	15.8
Often	2	10.5

How often do you have difficulty identifying error prone cases?

	Number of Respondents	Percentage of Respondents (%)
Rarely	11	73.3
Sometimes	2	13.3
Often	2	13.3

How often do you have difficulty identifying cases involving suspected fraud?

	Number of Respondents	Percentage of Respondents(%)
Rarely	9	69.2
Sometimes	2	15.4
Often	2	15.4

How often do you have difficulty assigning new case numbers?

	Number of Respondents	Percentage of Respondents(%)
Rarely	9	75.0
Sometimes	1	8.3
Often	2	16.7

Eligibility workers generally believe that the system is easy to use. For most functions, a large majority reports rarely having difficulty. There are several areas, however, in which a significant proportion of EWs reports sometimes or often having difficulty. These areas include: obtaining necessary information from the system, learning to use the system, and tracking outstanding verifications.

FOOD STAMP PROGRAM NEEDS

Worker Satisfaction Levels

How often is the system a great help to you in your job?

	Number of Respondents	Percentage of Respondents(%)
Sometimes	5	21.7
Often	18	78.3

How often is the system an added stress in your job?

	Number of Respondents	Percentage of Respondents (%)
Rarely	8	34.8
Sometimes	10	43.5
Often	5	21.7

How often is the system more of a problem than a help?

	Number of Respondents	Percentage of Respondents (%)
Rarely	15	65.2
Sometimes	6	26.1
Often	2	8.7

EWs generally think that the system positively influences job satisfaction. More than 78 percent of the eligibility workers feel that the system helps them in their jobs. Although approximately 65 percent of the workers believe that the system contributes to job-related stress, the same proportion believes that the system usually is more helpful than problematic.

Client Service

How often is expedited service difficult to achieve?

	Number of Respondents	Percentage of Respondents (%)
Rarely	13	59.1
Sometimes	6	27.3
Often	3	13.6

How often do you have difficulty providing expedited services?

	Number of Respondents	Percentage of Respondents(%)
Rarely	12	60.0
Sometimes	7	35.0
Often	1	5.0

Although most EWs feel that there are few problems associated with providing expedited service to clients, a significant minority reports some difficulties in this area.

Fraud and Errors

No data are available to address fraud and errors with the Virginia system because all the questions in this category compare the current and previous systems. Since Virginia's system was implemented more than five years ago, comparative questions are not applicable.

APPENDIX C

STATE OF VIRGINIA

ANALYSIS OF MANAGERIAL USER SATISFACTION SURVEYS

OVERVIEW

This appendix presents the results of the Managerial Level User Satisfaction Survey. Frequency counts of responses to all applicable items on the survey are included, grouped by the topic covered by the item. The results for the items covering each topic are summarized as well.

The responses to the Managerial Level User Satisfaction Survey are the perceptions of eligibility worker (EW) supervisors in Virginia. In other words, these responses do not necessarily represent a "true" description of the situation in the State. For example, the results presented regarding the response time of the system reflect the managers' perceptions about that response time, not an objective measure of the actual speed of the response.

Description of the Sample

The following table summarizes the potential population size and the final size of the sample who responded.

Number of EW Supervisors in Virginia	Number Selected to Receive Survey	Percentage Selected
259	30	11.6%
	Number Responding to Survey	Response Rate
	17	56.7%

The supervisors selected to receive the survey were selected randomly so their perceptions would be representative of supervisors in Virginia. The total number of respondents, however, is low. The low response rate produces a small sample whose responses may not be representative of this random selection.

Summary of Findings

Most EW supervisors in Virginia regard the system positively. The majority of EW supervisors thinks that system response time, availability, accuracy, and ease of use generally are good. Most supervisors also feel that the system supports management needs adequately and contributes to job satisfaction. More than 94 percent of EW supervisors believe that the system is a great help.

Since Virginia's current system has been operational since 1985, comparisons between the current and previous systems would be of limited value. Responses to comparative questions, therefore, are not solicited for systems that were implemented more than five years ago.

SYSTEM CHARACTERISTICS

Response Time

What is the quality of overall system response time?

	Number of Respondents	Percentage of Respondents
Poor	3	17.6
Good	11	64.7
Excellent	3	17.6

What is the quality of system response time during peak periods?

	Number of Respondents	Percentage of Respondents
Poor	4	25.0
Good	12	75.0

How often is the system response time too slow?

	Number of Respondents	Percentage of Respondents
Rarely	3	18.8
Sometimes	11	68.8
Often	2	12.5

EW supervisors in Virginia generally are satisfied with system response time. Over 82 percent of the respondents feel that overall system response time is good or excellent, and three quarters believe that response time is good during peak processing periods. A majority of the supervisors, however, thinks that response time sometimes or often is too slow.

Availability

How often is the system available when you need to use it?

	Number of Respondents	Percentage of Respondents
Sometimes	4	23.5
Often	13	76.5

How often is the system down?

	Number of Respondents	Percentage of Respondents
Rarely	3	17.6
Sometimes	13	76.5
Often	1	5.9

Almost 77 percent of EW supervisors report that the system often is available when they need to use it; however, most supervisors also feel that there are instances of downtime. This downtime, however, apparently is not intrusive enough to detract from the perception of overall system availability.

Accuracy

What is the quality of the information in the system?

	Number of Respondents	Percentage of Respondents
Poor	1	5.9
Good	10	58.8
Excellent	6	35.3

EW supervisors generally perceive the quality of the system's data to be acceptable. More than 94 percent of the supervisors feel that the information in the system is good or excellent.

Ease of Use

How often do you have difficulty obtaining necessary information from the system?

	Number of Respondents	Percentage of Respondents
Rarely	12	70.6
Sometimes	3	17.6
Often	2	11.8

How often do you have difficulty learning to use the system?

	Number of Respondents	Percentage of Respondents
Rarely	11	68.8
Sometimes	4	25.0
Often	1	6.3

How often do you have difficulty automatically terminating benefits for failure to file?

How often do you have difficulty generating adverse action notices?

	Number of Respondents	Percentage of Respondents
Rarely	9	90.0
Sometimes	1	10.0

How often do you have difficulty generating warning notices?

	Number of Respondents	Percentage of Respondents
Rarely	2	66.7
Sometimes	1	33.3

How often do you have difficulty restoring benefits?

	Number of Respondents	Percentage of Respondents
Rarely	14	93.3
Sometimes	1	6.7

EW supervisors generally feel that the system is easy to use. For each function discussed, at least two thirds of the EW supervisors report rarely having difficulties in these areas. Functions that are sometimes or often difficult for the largest proportion of workers include learning to use the system, obtaining information from the system, and generating warning notices. The response rate for the question regarding warning notices, however, is too low to provide any information beyond individuals' perceptions.

FOOD STAMP PROGRAM NEEDS

Supervisor Satisfaction Levels

How often is the system a great help to you in your job?

	Number of Respondents	Percentage of Respondents
Sometimes	1	5.9
Often	16	94.1

How often is the system an added stress in your job?

	Number of Respondents	Percentage of Respondents
Rarely	10	62.5
Sometimes	4	25.0
Often	2	12.5

EW supervisors feel that the system contributes to job satisfaction. More than 94 percent of respondents feel that the system often is a great help, and the majority thinks it rarely creates added stress in their jobs.

Management Needs

What is the quality of the reports produced by the system?

	Number of Respondents	Percentage of Respondents
Poor	1	5.9
Good	12	70.6
Excellent	4	23.5

What is the quality of the support provided by the technical staff supporting the automated system?

	Number of Respondents	Percentage of Respondents
Poor	3	18.8
Good	12	75.0
Excellent	1	6.3

How often do you have difficulty making mass changes to the system?

	Number of Respondents	Percentage of Respondents
Rarely	9	81.8
Sometimes	2	18.2

How often do you have difficulty meeting Federal reporting requirements?

	Number of Respondents	Percentage of Respondents
Rarely	8	72.7
Sometimes	3	27.3

Most EW supervisors feel that the system supports management needs. Over 94 percent of the EW supervisors think that the quality of the reports produced by the system is good or excellent, and more than 81 percent feel that technical staff support is good or excellent. Large majorities of responding EW supervisors report rarely having problems making mass changes or meeting Federal reporting requirements.

Client Service

No data are available to address client service because all the questions in this category compare the current and previous systems. Since Virginia's system was implemented more than five years ago, comparative questions are not applicable.

Fraud and Errors

No data are available to address fraud and errors with the Virginia system because all the questions in this category compare the current and previous systems. Since Virginia's system **was** implemented more than five years ago, comparative questions are not applicable.